

## Appendix B: Mercury Reduction Options (organized by type of cost)

Action Item	Change Required	Level of Government	Comments
<b>These actions will increase the cost of mercury as an input</b>			
Do not sell stockpile mercury	Modify	National	Stockpile sales suspended through FY 1996 pending final DOD decision
Ban exports	New	National	No restrictions currently exist for exporting mercury
Tax mercury use	New	National	A tax would have to be high enough to compensate for the
Tax virgin mercury	New	National	generally small quantities of mercury used by any single facility
Phase out intentional use	New	National or State	Existing restrictions have accounted for some of the decline in mercury use
Ban "frivolous uses" (low value and non-essential uses)	New	National or State	This would require an agency to define "essential uses"
Develop significant new user regulations under TSCA	New	National	Efforts are underway to explore this option
Develop use-by-use control plan	New	National or State	
<b>These actions will increase the cost of polluting behavior associated with mercury</b>			
Develop policies for mining practices	New	(International)	No domestic mercury mining; policies could address mercury recovered from gold mining
Create positive incentives to recover/dispose incidental Hg	New	National or State	Recycling facilities must be convenient to use and access
Establish mercury emission limits for power plants	New	National or State	EPA Clean Air Act Utility Study is evaluating this option
Establish mercury controls on medical and municipal incinerators	New	National or State	Structure controls so that source reduction is a cheaper alternative
Encourage source reduction and use reduction	Modify	National or State	Expensive control technology or disposal restrictions could cause consumers and disposal facilities to avoid mercury items
Push conversions from coal to gas	New	National	May need studies on mercury content and environmental impact of alternative fuels
From other recycling of lamps	Modify	National, State	RCRA rule changes are pending regarding lamp recycling and disposal
Implement changes to sewage treatment authority	Modify	National, State, Local	Identify sources of mercury; develop reduction programs; demonstration projects could highlight different approaches
Develop national mercury management plans	New	National	
Create repository for mercury (retire from use)	New	National	Investigate options; learn from work in Sweden
Revise RCRA options for disposal of mercury	Modify	National	Evaluate need to revise RCRA rules re: incinerating mercury wastes

**K** Change required = the type of change needed to the existing framework for mercury

**E** New = need new regulation or program, Expand = expand an existing program to other

**Y** states or to other industries

Modify = modify an existing program so that it focuses specifically on mercury, or results in additional mercury reductions

Level of government = indicates whether or not the program/regulation requires a national effort or could occur at a state level

Comments = observations on action items that will encourage mercury reductions

This table organizes the action items identified in Appendix A by the type(s) of costs involved in each action item:

Increase INPUT cost

Increase cost of using/leasing mercury (POLLUTING BEHAVIOR)

Increase cost of PUBLIC CONCERN, or

Decrease cost of ENVIRONMENTAL ALTERNATIVES

## Appendix B: Mercury Reduction Options (organized by type of cost)

Action Item	Change Required	Level of Government	Comments
Source separate prior to disposal	New	National, State, Local	Need adequate, conveniently located facilities to accept mercury-containing items
Lower TRI threshold	Modify		A lower threshold would require more facilities to report, and broaden awareness of releases among industry and communities
Develop use-by-use control plan	New		
<b>These costs will increase the cost of public concern associated with using or releasing mercury</b>			
Establish and issue uniform fish consumption advisories	Modify	National, State	Great Lakes states have developed common proposed methodology (under review)
From other voluntary programs	Expand	National, State	
Establish a mercury bulletin board to share information	Expand	National, State	
Educate consumers about mercury risks	Expand	National, State	Consumers that understand mercury problems and what items contain mercury can seek alternatives and help spur industry creativity to meet demand for mercury-free items
Educate consumers about mercury containing products	Expand	National, State	
Increase awareness of household hazardous waste	Expand	National, State	
Develop international awareness through OECD, IJC	New	National	
Require labeling for mercury-containing products	Expand	National, State	Labeling would allow consumers to make informed purchasing and disposal decisions
Recognize industry for voluntary reductions	Expand	National, State	Public recognition program would elevate importance of mercury reduction efforts
Expand/broaden TRI	Modify	National	Efforts are underway to modify TRI to include additional industries
Establish rewards for recovery/elimination of mercury products	New	National, State	
Establish deposit fund system for mercury items	New	National, State	Helps prevent improper disposal and shift demand to Hg-free items
<b>These actions will lower the cost of adopting environmentally preferred alternatives</b>			
Encourage purchase of non-mercury instruments	New	National or State	Develop a program that identifies alternatives; work with trade associations
Target small businesses for education campaigns, technical assistance	Modify	National or State	Modify existing technical assistance programs to focus on mercury
Identify alternatives to the public (e.g., thermometers)	Expand	National or State	Build on efforts developed in Michigan and Minnesota
From other creativity of industry	New	National or State	Recognize companies with innovative mercury reduction programs
Develop products awardship	Expand	National or State	Work with industry to develop special programs
Provide economic incentives for research and development	New	National or State	Work with industry to develop special programs
Implement a mercury alternatives demonstration project	New	National or State	
Establish targets and deadlines to drive technical innovation	New	National or State	Could result in more rapid development of alternative technology
Establish financial and other rewards	New	National or State	
Expedite FDA processing of mercury-free medical technologies	Modify	National	Make it easier and more attractive to develop this technology
Provide technical assistance	Modify	National or State	Target mercury users

## Appendix B: Mercury Reduction Options (organized by type of cost)

Action Item	Change Required	Level of Government	Comments
Promote mercury-free technologies (e.g., lamp contests)	New	National or State	Reward companies that offer these items
Provide research dollars, esp. to small users	Modify	National or State	Target specifically to mercury reductions
Develop better control technologies	New	National or State	Research or demonstration projects could speed development
Promote mercury research on substitutes, toxicity	New	National	Develop special programs to concentrate on Hg-free alternatives
Reward chlor-alkali plants for changing technology	New	National or State	Offer distinct cost savings (e.g., tax incentives)
Develop design contests w/ due dates for mercury-free	New	National or State	Work with industry; target uses where lack of existing alternative impedes further reductions
Encourage energy conservation and non-coal energy	New	National or State	Reward utilities that implement energy conservation programs
Create demand for recycling	New	National or State	Provide incentives to encourage recycling
Promote post-consumer recycling (e.g., industry take-back)	Expand	National or State	Develop cooperative programs with industry
Provide tax credits as incentive to change technology	Modify	National	Must be targeted specifically to mercury reduction